

### **REMARKS**

The Office Action dated July 26, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-15 are currently pending in the application, of which claims 1, 9, 11-13, and 15 are independent claims. Claims 1-12 have been amended, and claims 13-15 have been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-15 are respectfully submitted for consideration.

Claim 1 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. The Office Action took the position that the “converting at least one of said at least one Internet domain name” occurs conditionally, but that the no claim of the conditions is made in claim 1. The Office Action stated that “this renders claim 1 indefinite, as one of ordinary skill in the art would not know what conditions such a step occurs under.” Applicants respectfully traverse this rejection.

The term “conditionally” is clear on its face, and does not require recital of specific conditions to be definite. One of ordinary skill in the art would understand that “conditionally” indicates that the converting is performed on the basis of a condition. The fact that the condition is not specified makes the claim broader, not indefinite. Breadth is not the same as indefiniteness. Thus, Applicants are not required by 35 U.S.C. 112, second paragraph, to limit the claim to specific conditions. Moreover, one of

ordinary skill in the art could identify an example condition by reference to claim 4. Accordingly, Applicants respectfully submit that the Office Action's analysis is incorrect, and respectfully request that this rejection be withdrawn.

Furthermore, claim 1 has been amended to recite: "wherein the conditionally converting comprising converting the Internet domain name when the Internet domain name fulfills a predetermined condition." Applicants respectfully submit that this amendment clarifies claim 1 and that, in view of the arguments above and the clarifying amendment, claim 1 is definite.

Claim 4 was rejected under 35 U.S.C. 112, fourth paragraph, because claim 4 allegedly does not further limit claims 1 or 3. The Office Action took the position that "claim 4 could render invalid a step occurring in claim 1," and concluded that therefore "claim 4 does not further limit claims 1 or 3." Applicants respectfully traverse this rejection.

Claim 4 clearly further limits claim 1, by specifying a condition for performing the "converting" in claim 1. This limitation has been clarified by the enclosed amendment to claim 4, and Applicants respectfully submit that the amendment to claim 4 renders the rejection of claim 4 moot.

Claims 1-4 and 9-12 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/083198 of Kim et al. ("Kim"). Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested by Kim.

Claim 1, upon which claims 2-8 depend, is directed to a method including receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format. The method also includes conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label. The method further includes supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format. The conditionally converting comprising converting the Internet domain name when the Internet domain name fulfills a predetermined condition.

Claim 9, upon which claim 10 depends, is directed to a system including first means for receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format. The system also includes second means for conditionally converting at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label. The system further includes third means for supplying the data to database operations, the supplied data including at least one Internet domain name in the second format. The

second means is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition.

Claim 11 is directed to a name server including a first interface configured to receive data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format. The name server also includes a modification module, operably connected to the first interface, configured to conditionally convert at least one of said at least one Internet domain name into a second format in which at least two successive labels of the at least one of said at least one Internet domain name form a single label. The name server further includes a second interface, operably connected to the modification module, configured to supply the data to database operations, the supplied data including at least one Internet domain name in the second format. The modification module is configured to convert the Internet domain name when the Internet domain name fulfills a predetermined condition.

Claim 12 is directed to a computer program product embodied on a computer readable medium, the product comprising computer readable code configured to cause a computer to substantially perform receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format. The computer program product also comprises code configured to cause a computer to perform conditionally converting at least one of said at least one Internet domain name

into a second format in which at least two successive labels of the at least one of said at least one Internet domain name are combined to form a single label. The computer program product further comprises code configured to cause a computer to perform supplying the data to the database operations, the supplied data including at least one Internet domain name in the second format. The conditionally converting comprising converting the Internet domain name when the Internet domain name fulfills a predetermined condition.

Applicants respectfully submit that Kim fails to disclose or suggest all of the elements of any of the presently pending claims.

Kim generally relates to a method of automatically generating an IPv6 address using an E.164 telephone number and of looking up an IP address assigned to an E.164 telephone number. As Kim explains at paragraph 0008, Kim aims to provide a method of automatically generating an IPv6 address using the telephone number of the E.164 format allocated to the telephone terminal in an IPv6-based next-generation Internet communication environment.

Claims 1, 9, and 11 recite “the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format.” Applicants respectfully submit that Kim fails to disclose or suggest at least these features of the claimed invention.

The Office Action pointed to paragraph 0034 of Kim as disclosing these features. Paragraph 0034, however, discloses that an identifier for displaying a name address is

represented as “#”. Thus, a name address for a telephone number can be expressed as, for example, “#82-2-123-4567”. In other words, the pound sign followed by the complete telephone number including the area code is referred to as the “name address.” However, this is not an “Internet domain name comprising a plurality of successive labels separated by dots.”

Accordingly, Kim does not and cannot disclose or suggest at least the following elements: “receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format” (claim 1), “first means for receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format” (claim 9), and “a first interface for receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format” (claim 11).

Accordingly, it is respectfully submitted that Kim does not disclose or suggest all of the elements of claims 1, 9, and 11. Claims 2-8 and 12 depend from claim 1, and claim 10 depends from claim 9. Claims 2-4, 10, and 12 recite additional limitations as well as those incorporated by reference to claims 1 and 9 respectively. Thus, it is respectfully submitted that each of claims 2-4, 10, and 12 recites subject matter that is

neither disclosed nor suggested in Kim. Therefore, it is respectfully requested that the rejection of claims 1-4 and 9-12 be withdrawn.

The Office Action responded that the E.164 number is a “name address that corresponds to an IP address” and “is used by a DNS to look up an IP address.” Applicants respectfully submit that even if the E.164 number were as the Office Action suggested, it would still not comprise “a plurality of successive labels separated by dots.”

The Office Action responded that dashes and dots “are both as delimiters to separate one label from another” and thus “are functionally equivalent.” Applicants respectfully submit that they are not functionally equivalent in the art of the Internet. If the Examiner disagrees, the Examiner is invited to conduct a simple experiment to determine whether dots and dashes are functionally equivalent. Instead of accessing the USPTO’s web page by the conventional means of using the address: <http://www.uspto.gov/>, the Examiner is invited to attempt to reach the USPTO’s web page by using the address: <http://www-uspto-gov/> in which the dots have been replaced by dashes. Applicants respectfully submit that using a normal web browser such as Microsoft Internet Explorer (R), the result of the former approach will be access to the USPTO’s web page, and the result of the latter approach will be an error such as “The page cannot be displayed” or redirection to a search engine. Applicants, therefore, respectfully submit that – in the field of the Internet – dots and dashes are not functionally equivalent. Accordingly, Applicants respectfully but firmly disagree with the Office Action’s position that they are functionally equivalent.

Furthermore, in Kim, the dashes serve a different function than dots in an Internet domain name. This can be seen by examining what happens in Kim. In Kim, the format of the telephone number is changed by removing the dashes before requesting the IP address corresponding to the telephone number. However, one of ordinary skill in the art would recognize that the telephone number remains unchanged regardless of the dashes presence or absence. However, if dots are removed from an Internet domain name, the name changes and the result can be either a different IP address or an error.

This latter lack of functional equivalency can again be confirmed, if the Examiner disagrees, by a simple experiment. The Examiner is invited to compare attempting to reach the USPTO through the conventional means of typing the address: <http://www.uspto.gov/> with the result of typing the address: <http://wwwuspto.gov/> in which the first dot has been removed. Applicants respectfully submit that using a typical web browser like Microsoft Internet Explorer (R), the result of the former entry will be access to the USPTO's web page, and the result of the latter entry will be an error, such as "Cannot find server" or "The page cannot be displayed." Accordingly, Applicants respectfully but firmly disagree with the Office Action's position that they are functionally equivalent.

Furthermore, Applicants respectfully submit that in the art of Internet domain names, dots and dashes are not functionally equivalent, because dashes are not used to delimit labels in the way that dots are used to delimit labels. Accordingly, Applicants



respectfully submit that the Office Action's position that both dashes and dots are functionally equivalent is mistaken within the art of Internet domain names.

Additionally, Applicants respectfully traverse the Office Action's position that "conditionally converting" is optional. Applicants respectfully submit that no optional language such as "or" has been used with regard to the "conditionally converting" step. The fact that the predetermined condition may not be met in a particular case does not make a conditional step optional. In order to anticipate, Kim must disclose all of the elements of the claims, including the feature of "conditionally converting" as recited by claim 1.

The Office Action cited MPEP 2106(II)(C) to support its position, but Applicants respectfully submit that MPEP 2106(II)(C) supports Applicants' position. The claim language requires the step of "conditionally converting" to be performed. There is nothing in the context of the claim feature that permits its omission. Furthermore, there is no language such as the four examples provided in the MPEP that would raise a question as to the limiting effect of the language in the claim. Accordingly, Applicants respectfully disagree with the Office Action's position that the "conditionally converting" step is optional.

Claims 5-7 were again rejected under 35 U.S.C. 103(a) as being unpatentable over Kim. The Office Action took the position that Kim taught all of the features of the claims, except "wherein the predetermined number of labels is three." Applicants

respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in Kim.

Kim and its deficiencies with respect to claim 1, upon which claims 5-7 depend, are discussed above. Applicants respectfully submit that the Office Action's arguments with respect to size changes are not applicable to the above explained deficiencies of Kim with respect to "receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format" as recited by claim 1.

Additionally, Applicants respectfully traverse the Office Action's argument that "wherein the predetermined number of labels is three" is a limitation that is only a size. The Office Action cites in support of this argument, *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); and *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), and MPEP 2144.04 (IV) (A). Applicants respectfully submit that these citations do not support the Office Action's argument. In each of those cases, a physical dimension or proportion of dimensions was at issue. In *Rose*, for example, the issue was whether the size of the package was patentable. Likewise, in *Rinehart*, the issue was whether scaling up a prior art process was patentable. Similarly, in *Gardner*, the issue was whether changes in relative dimensions were patentable. MPEP 2144.04 (IV)(A) cites the same cases and explains these same issues in greater detail, but does not add any additional authority. In contrast the

limitation at issue in the present application is “wherein the predetermined number of labels is three.” This limitation provides a value of a parameter, not a physical dimension or proportion of dimensions. Accordingly, it is respectfully submitted that the Office Action’s argument is inapplicable to this limitation.

The Office Action response to the differences between the cited case law and the claims of the present application was to assert that Applicants’ position is incorrect. The Office Action’s view is that the number of domain name labels indicates the “size” of the domain name and that more labels are equivalent to a “larger” domain name.

If this is supposed to be a taking of “Official Notice,” Applicants respectfully traverse it as such. It is clearly erroneous. Domain names do not, within the art of Internet domain names, have “size.” The closest equivalent to “size,” might be “length” in terms of the number characters used to construct the domain name. However, the number of characters used to construct the domain name is not indicated by the number of labels. There can be a very long domain name with two labels and a very short domain name with three labels. Accordingly, Applicants respectfully disagree with the Office Action’s position that “number of labels” is a “size.” Furthermore, even if it were a size (not admitted) it is not a physical dimension, as noted above. Therefore, in any event, the cited case law is clearly inapplicable.

Accordingly, both because the Office Action’s argument is inapplicable to the limitation previously identified, and because the Office Action’s argument is inapplicable

to the limitation it sought to address, it is respectfully requested that the rejection of claims 5-7 be withdrawn.

Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of U.S. Patent Application Publication No. 2003/0007482 of Khello et al. (“Khello”). The Office Action took the position that Kim discloses all of the elements of the claim except, “receiving data including another domain name in the second format” and “converting the another domain name received in the second format back to the format.” Applicants respectfully submit that the claim recites subject matter that is neither disclosed nor suggested in the combination of Kim and Khello.

Kim and its deficiencies with respect to claim 1, upon which claim 8 depends, are discussed above. Applicants respectfully submit that Khello does not remedy the deficiencies of Kim, and therefore that the combination of Kim and Khello does not disclose or suggest at least “receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format” as recited by claim 1.

Khello generally relates to a method and apparatus for resolving an entity identifier into an internet address using a domain name system (DNS) server and an entity identifier portability database. As explained at paragraph 0055, Khello suggests that a user A may enter an E.164 telephone number for user B into his user equipment. The user equipment may then generate a query. After various processing in the network,

a DNS server may access its mobile number portability database which includes B's telephone number, and forward a corresponding IP address along with B's telephone number back to A's user equipment. As Khello explains at the end of paragraph 0055, this whole process may be performed so that a game may be played between users A and B.

Khello, however, is silent as to "receiving data to be supplied to database operations, the data including at least one Internet domain name comprising a plurality of successive labels separated by dots, said at least one Internet domain name being in a first format" as recited by claim 1. Accordingly, it is respectfully submitted that Khello does not remedy the deficiencies of Kim, and thus that the combination of Khello and Kim does not disclose or suggest all of the limitations of claim 8.

Additionally, there is no motivation to combine Kim and Khello to obtain the claimed invention. In Kim, the general idea is that a telephone number corresponds directly to an IP address. Therefore, Kim generally discloses a method of automatically generating IPv6 addresses using E.164 telephone numbers and of looking up an address assigned to an E.164 telephone number. The generation method, shown in FIG. 4 of Kim, involves converting each digit of an E.164 number to a 4-bit binary format and padding the resulting sequence to form a bit sequence comprising 64 bits. The look-up method, shown in figures 6a to 7 of Kim, corresponds to a conventional DNS database system, except that the method is based on the E.164 number instead of the domain name of the conventional system.

Khello, in contrast, discloses a mechanism for resolving an entity identifier, such as a telephone number, into an Internet address. The aim of Khello is to accommodate portability of entity identifiers without having to substantially modify or rework the DNS infrastructure or various established number portability schemes.

In each of the references the problem and solution disclosed are different from each other, and from that presented in the present application. The present application indicates that an objective is to improve the performance of the present de-facto name servers. This can be accomplished by conditionally combining at least two successive labels of an Internet domain name or Fully Qualified Domain Name (FQDN) to be supplied to database operations. In other words, Applicants have identified that the nature of the conversion of E.164 numbers into the FQDNs, or the nature of any other similar conversions producing like FQDNs with plenty of short labels, can degrade the performance of the de-facto name servers, as explained at paragraph 0024 of the present specification.

The cited references are completely silent about such a problem, let alone any solution to such a problem. Therefore, the idea of using modified or converted FQDNs to improve the performance of the name servers is not known from the references, nor are the problems identified by Applicants known in the references. Accordingly, there would be no motivation to combine references or otherwise modify the references to address the problems identified by the Applicants, because there was no disclosure of the problems to so motivate a combination.

The Office Action responded regarding motivation to combine by stating that the motivation is provided in Khello's paragraph [0054]. Applicants respectfully disagree. Khello's paragraph [0054] is simply a reason to practice Khello's invention. It is not a reason to combine Khello with Kim, or Kim with Khello. Accordingly, Applicants respectfully submit that the Office Action's proposed motivation to combine is – in fact – not a motivation to combine, but simply a motivation to practice Khello.

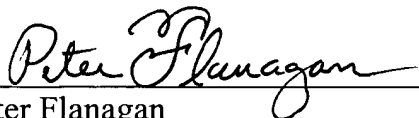
Thus, the rejection should also be withdrawn in view of a lack of motivation to combine the references. For all of the above reasons, it is respectfully requested that the rejection of claim 8 be withdrawn.

For the reasons explained above, it is respectfully submitted that each of claims 1-15 recites subject matter that is neither disclosed nor suggested in the cited references. Accordingly, it is respectfully requested that all of claims 1-15 be allowed, and that this application be passed to issue.

If – for any reason – the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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Enclosures: Additional Claim Fee Transmittal  
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